

REMARKS UNDER 37 C.F.R. 1.111

Reconsideration and allowance are respectfully requested.

The applicant offers a terminal disclaimer in complete satisfaction of pages 2 and 3 of the office action.

A summary of the unusually large number of rejections follows.

<u>Rejection</u>	<u>Office Action</u> <u>Page</u>	<u>Claims</u>	<u>Reference</u>	<u>Section</u>
1	3	1	Matsushita ✓	102
2	4	3-7, 9-10, 30-36	Brown ✓	102
3	4	3-10, 30-36	Tennigkeit ✓	102
4	5	1, 2-6, 9-10, 32-36	Light ✓	102
5	5	2-10, 20-22 30-34, 36	Dombay	102
6	6	2-10, 20-22 30-34, 36	Bures	102
7	7	2-10, 20-22, 30-36	Dombay	103(a)
8	8	2-10, 20-22 30-36	Bures	103(a)

The applicant appreciates the examiner's independent citation and application of a significant number of references, since it reflects that the examiner has given the application full and careful attention and has cited many references.

The unusually large number of rejections of the same claims suggests a shotgun approach, and under the "protests too much" theory suggests uncertainty of the rejections.

Eight independent rejections suggests a novel approach of stacking many sieves together in a hope that collectively they will hold water.

One might ask why are there so many references cited and applied.

The answer may be found in the examiner's interpretation of the claims. For example, Bures was initially cited without providing a complete translation. The translation shows use of an inorganic or organic solvent, not use of water, which is critical to the new invention.

Dombay uses a strong "concentrated hydrochloric acid" and a methylated spirit which is opposite to the critical environmental friendliness of the new invention.

Light has been supplied without a complete translation, which is proscribed. The incomplete translation shows use of a sulphurous acid and never discusses water. Both of those Light features are contrary to the new invention. Light describes tanning and treats leather, not wood.

Tennigkeit dyes hair, does not color wood, and uses a paste, cream or gel, perhaps over a sink in a beauty parlor or sitting with a gown in a hairdresser's chair.

Brown dyes hair, does not color wood, and recommends shampooing the hair, again in a beauty parlor over a sink.

Prior art reference, in order to be relied upon as a basis for rejecting applicant's invention, must either be in field of applicant's endeavor or, if not, be reasonably pertinent to

particular problem with which inventor was concerned; combination of elements from non-analogous sources, in manner that reconstructs applicant's invention only with benefit of hindsight, is insufficient to present prima facie case of obviousness. In re Oetiker, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

Matsushita has been supplied only in a brief translation and not in a full translation, required when under appeal, describes first bleaching wood, which leads away from the invention. In addition, Matsushita never mentions water, which is critical to the invention.

When one appreciates that not one of the references teaches, suggests, renders obvious or motivates the invention as precisely set forth in the claims, the reasons for multiple citations becomes apparent:

There is not one reference which teaches, suggests, renders obvious or motivates the invention as precisely set forth in the claims.

In fact, each of the references leads away from the invention as claimed.

**The present claims are patentable under 35 U.S.C. 102(b).**

For an invention to be anticipated, it must be demonstrated that each and every element of the claimed invention is present in the "four corners" of a single prior art, either expressly described therein or under the principle of inherency. Lewmar

Marine Inc. v Barient Inc., 3 USPQ2d 1766, 1767-1768 (CAFC, 1987).

Each of the present claims is patentable over the art of record.

The invention uniquely provides permanent wood staining without use of hazardous or environmentally unfriendly chemicals, which is new and unobvious. The invention has two parts, and the staining is accomplished in two steps. The first part is an aqueous solution of metal salts, which is applied to the wood and which penetrates the surface of the wood. The second solution is an aqueous oxidizer solution which penetrates the wood and fixes the metal salts in place within the wood.

Claim 1 is patentable under 35 U.S.C. 102(b) over Matsushita.

Claim 1 describes a kit for imparting a pre-determined color to a solid wood substrate, comprising an aqueous solution of a first compound consisting of a mineral salt and water as a first application on the solid wood substrate, and a second component comprising an aqueous solution of a peroxide as a sequential application on the solid wood substrate, the mineral salt and peroxide solutions as sequential applications in effective amounts on the substrate and colored layer on the substrate formed by the applications reacting with each other in the presence of the substrate to impart the color to the substrate.

Matsushita relates to colored woods manufactured by impregnating woods with reactive coloring solutions and with dye

solutions and synthetic resins and color coatings. The present specification clearly points out the disadvantages of prior art staining systems, such as Matsushita, and provides for a unique coloring system that allows substances to be applied to the wood that react in situ resulting in automatic coloring of the substrate because of the reaction. Claim 1 does not relate to coloring the substrate by applying a dye or a synthetic resin or coloring solutions. Matsushita thus teaches away from the claimed invention and cannot anticipate claim 1.

The absence from prior art reference any claimed element negates anticipation. Kloster Speedsteel AB v. Crucible, Inc., 230 USPQ 81, 84 (Fed. Cir. 1986).

Claims 3-7, 9-10 and 30-36 are patentable under 35 U.S.C. 102(b) over Brown.

Claim 30 describes a kit for treating and coloring a wood substrate, comprising a first component aqueous solution of oxidizable metal salt preparation for a first application to the wood substrate, and a second component aqueous solution of oxygen source preparation for a sequential application to the wood substrate, the aqueous solution preparations being adapted to sequentially penetrate the wood substrate when sequentially applied, and both aqueous solution preparations when applied sequentially in effective amounts, being adapted to react with each other within the wood substrate to impart physical color characteristic to the wood substrate.

Brown does not dye wood, but rather dyes hair, which has nothing to do with dying wood. Moreover, Brown has an intermediate step of contacting hair with an organic solution and rinsing or shampooing the hair, and then bleaching the hair with hydrogen peroxide to obtain a lighter color. The hydrogen peroxide in Brown leads away from the present invention, because the hydrogen peroxide does not fix the metal salts in place. Nor is there anything in Brown which would suggest that Brown be used with wood.

The dependent claims add further unique features to claim 30, and each is patentable over Brown.

Claim 3 adds to claim 30 that the oxygen source is a peroxide and both formulations are aqueous solutions.

Claim 4 adds to claim 30 that the metal salt is selected from the group consisting of salts of iron, silver, zinc, cerium, copper, magnesium, molybdenum, nickel, tin, chromium, aluminum, barium, calcium, sodium, potassium, and titanium, and combinations.

Claim 5 adds to claim 30 that the metal salt is selected from the group consisting of salts of aluminum, antimony, beryllium, bismuth, cadmium, chromium, cobalt, copper, gold, iridium, lead, magnesium, manganese, mercury, molybdenum, nickel, niobium, osmium, platinum, plutonium, potassium, rhodium, selenium, silicon, silver, sodium, tantalum, thorium, tin, titanium, tungsten, uranium, vanadium, and zinc, and combinations.

Claim 6 adds to claim 30 that the metal salt is selected from the group consisting of sulfates, chlorides, perchlorates, acetates, nitrates, permanganates, thiosulfates, and oxides, and combinations.

Claim 7 adds to claim 30 that the metal salt is selected from the group consisting of silver sulfate, silver perchlorate, silver nitrate, silver sulfate, iron (II) chloride, zinc perchlorate, iron (II) perchlorate, iron (II) sulfate, copper acetate, sodium thiosulfate, magnesium thiosulfate, potassium thiosulfate, potassium nitrate, potassium permanganate, copper nitrate, copper II carbonate dihydroxide, copper sulfate, titanium III sulfate, magnesium nitrate, cerium (III) perchlorate, and cerium nitrate, and combinations.

Claim 9 adds to claim 30 that the oxygen source is a peroxide.

Claim 10 adds to claim 30 that the oxygen source is selected from the group consisting of hydrogen peroxide, sodium peroxide, zinc peroxide, calcium peroxide, barium peroxide, and lithium peroxide, and combinations.

Claim 30 describes a kit for coloring a wood substrate, comprising a metal salt preparation, and an oxygen source preparation, the preparations being adapted to penetrate the substrate when applied, and both preparations, when applied sequentially in effective amounts, being adapted to react with each other to impart a fixed physical characteristic to the substrate.

Claim 31 adds to claim 30 that the metal salt preparation and/or the oxygen source preparation further comprises an additive selected from the group consisting of thickener, alcohol, emulsifier, coloring agent, pigment, dye, bleach, sealer, finishing agent, tint, acrylic finish, latex finish, polyurethane, alcohol, gelling agent, tableting agent, surfactant, buffer, citric acid, tannic acid, acetic acid, other acid, color, salt, stabilizer, antimicrobial, antifungal, insecticide, insect repellent, ultraviolet protectant, and fire retardant, and combinations.

Claim 32 adds to claim 30 that the metal salt preparation is an aqueous solution comprising between about 0.001% and about 20% (w/v) metal salt.

Claim 33 adds to claim 30 that the oxygen source preparation is an aqueous solution comprising between about 0.1% and about 50% (w/v) peroxide.

Claim 34 adds to claim 30 that the metal salt preparation is an aqueous solution comprising between about 0.025 % and about 8% (w/v) metal salt.

Claim 35 adds to claim 30 that the oxygen source preparation is an aqueous solution comprising between about 0.3% and about 15% peroxide.

Claim 36 adds to claim 30 that the preparations are concentrates suitable for dilution by a user.

Brown, from an unrelated art, provides for dyeing hair to promote melanogenesis in hair, which has nothing to do with solid



wood substrate coloring. Brown defines dyeing the hair with intermittent intervals to a dark color and then treating with hydrogen peroxide to obtain the desired color. That is contrary to the claimed in situ reaction of the mineral salts and hydrogen peroxide within the wood substrate being treated.

Thus, Brown does not teach nor suggest the claimed invention and therefore cannot anticipate the claims.

Claims 3-10 and 30-36 are patentable under 35 U.S.C. 102(b) over Tennigkeit.

Claims 3-10 and 30-36 have been described earlier.

Like Brown, Tennigkeit relates to dyeing hair with an oxidation dye mixed with an oxidizing agent and a catalyst. However, nothing in the reference teaches, suggests or inherently provides for coloring a wood substrate in which substances are applied to the substrate and react in situ to provide the coloring which has nothing to do with pre-made dyes being applied to hair. Thus, the reference leads away from the claimed invention.

"To establish inherency, the extrinsic evidence 'must make it clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" In re Robertson, 48 USPQ2d 1949, 1951 (Fed. Cir. 1999) quoting from Continental Can Co. v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

Claims 1, 3-6, 9-10, 30, and 32-36 are patentable under 35 U.S.C. 102(b) over SU '297 (Light).

Claim 1 describes a kit for imparting a pre-determined color to a solid wood substrate, comprising a first component of an aqueous solution of a mineral salt, and a second component of an aqueous solution of a peroxide, the mineral salt and peroxide solutions being capable, when applied sequentially in effective amounts to the wood substrate, of reacting with each other in the presence of the wood substrate to impart the color to the substrate.

Claims 3-6, 9-10, 30, and 32-36 have been described earlier.

Light has nothing to do with the present invention because Light is a process for de-canning goatskin, followed by a pickling and re-canning or final canning, followed by neutralization and a combined dying and tallowing. Nothing in Light would refer to wood, and the use of the multiple steps in Light would lead away from the present invention. The complexity of Light would lead one away from the present invention. Moreover, there is nothing in the multiple step process of treating leather that would suggest a dying of wood in a two-step process.

Light relates to leather glove production by tanning in a combined hydrogen peroxide-sodium hydroxide solution and then treating with aluminum slats and dyeing. The reference teaching seeks to solve the problem of repeated tanning and pickling of

leather rather than having anything to do with color preservation as uniquely provided by the present invention.

"Inherency may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. Continental Can Co. v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed. Cir. 1991).

Claims 3-7, 30, 31, and 36 are patentable under 35 U.S.C. 102(b) over Yantai.

Claims 3-7, 30, 31, and 36 have been described earlier.

Yantai relates to treatment of marble to form glazed surfaces and thereafter etching and exposing the treated surface to make black markings of the decorations. That teaching has nothing to do with wood substrates and would in fact lead away from the present invention since there is not teaching or suggestion of an in situ reaction of two solutions to give an end-result of substrate collation.

Claims 2-8, 9-10, 20-22, 30-34, and 36 are patentable under 35 U.S.C. 102(b) over Dombay.

Claims 2-7, 9-10, and 30-34, and 36 have been described earlier.

Claim 8 adds to claim 30 that the metal salt is selected from the group consisting of molybdenum (VI) oxide, zinc sulfate, copper (II) chloride, nickel perchlorate, nickel sulfate, copper (II) perchlorate, tin (II) sulfate, tin (I) chloride, chromium

(III) sulfate, aluminum sulfate, cerium (III) perchlorate, zinc perchlorate, titanium hydride, chromium (III) perchlorate, zinc powder, manganese (II) chloride, aluminum chloride, titanium (IV) chloride, silver chloride, and titanium (II) sulfate, and combinations.

Claim 20 adds to claim 2 the step of drying the substrate between the two steps.

Claim 21 adds to claim 2 that the preparations are aqueous solutions and are applied between the freezing point and boiling point of the solutions under the process conditions of the method.

Claim 22 adds to claim 2 applying a sealing coat over the substrate surface.

Dombay merely coats wood with an oxidizing agent to lighten the wood. Dombay uses ammonium persulfate, and cupric sulfate as accelerants in concentrated hydrochloric acid with a methylated spirit, and an organic solvent teepol. In some cases Dombay treats some woods with an A solution to produce a darkening effect, and some woods with a B solution to produce a lightening effect. Whatever the result of Dombay, it is clear that Dombay does not teach the present invention as specifically pointed out in the claims.

Dombay relates to wood bleaching in which the reference mandates the use of methylated spirit, which the present invention particularly avoids. The present specification describes the ill-effects of prior art procedures that mandate

alcohol based substances which harm the environment. In fact, Example 4, relied on by the Examiner, provides for 150 ml of methylated spirit. Potassium permanganate and cupric sulphate are used as bleaching accelerants in the one-step Dombay bleaching process. Acetic acid is used to stop the bleaching.

Nothing in the entire reference teaches or suggests the unique kit that has an aqueous solution of a mineral salt and an aqueous solution of a peroxide, with the mineral salt solution being applied prior to the peroxide solution and the in situ reaction of the applied substances with the substrate.

Claims 2-10, 21, 30, 31, and 36 are patentable under 35 U.S.C. 102(b) over Bures.

Claims 2-10, 21, 30, 31, and 36 have been described earlier.

Bures relates to a three step process of treating woods with metal salts, oxidants, dyes and permeation agents. However, the reference does not teach nor suggest a kit for treating and coloring a wood substrate, comprising a first component aqueous solution of oxidizable metal salt preparation for a first application to the wood substrate, and a second component aqueous solution of oxygen source preparation for a sequential application to the wood substrate.

Bures has nothing to do with the aqueous solution preparations being adapted to sequentially penetrate the wood substrate when sequentially applied, and both aqueous solution preparations when applied sequentially in effective amounts,

being adapted to react with each other within the wood substrate to impart physical color characteristic to the wood substrate.

Since the cited reference does not disclose all the elements of the present invention, the reference cannot anticipate the present invention. Lacking an element of the claims, the reference cannot anticipate the invention. Carmen Indus., Inc. v. Wahl, 220 USPQ 481, 485 (Fed. Cir. 1983).

Lacking the claimed elements, the references cannot anticipate the present claims.

**The present claims are patentable under 35 U.S.C. 103(a).**

In considering the patentability of the present invention, it is requested that the Board consider the invention as a whole, consider the scope and content of the prior art as a whole, consider the differences between the claims at issue and the prior art, and consider the level of ordinary skill in the art to which the invention pertains at the time the invention was made. Graham v. John Deere Co., 148 USPQ 459, 467 (1966).

**THE INVENTION AS A WHOLE**

The invention considered as a whole is best described by the appended claims.

**PRIOR ART AS A WHOLE**

The prior art to which the invention pertains is typified by the references of record.

## DIFFERENCES BETWEEN THE INVENTION AND THE PRIOR ART

Each of the present claims defines unique features and each is individually patentable over the prior art.

The test in reviewing rejections under 35 U.S.C. 103 in which the examiner has relied on teachings of several references, is whether references, viewed individually and collectively, would have suggested claimed invention to a person possessing ordinary skill in the art, and citing references which merely indicate that isolated elements and/or features recited in the claims are known is not a sufficient basis for concluding that combination of the claimed elements would have been obvious. Ex parte Hiyamizu, 10 USPQ2d 1393-1395 (Board of Patent Appeals and Inter., 1988); In re Kaslow, 217 USPQ 1089 (Fed. Cir. 1983); In re Deminski, 230 USPQ 313 (Fed. Cir. 1986).

Claims 2-8, 9-10, 20-22, and 30-36, are patentable under 35 U.S.C. 103(a) over Dombay.

Claim 2 defines a method for treating and coloring a wood substrate with the kit of claim 30 comprising the steps of contacting a substrate with a formulation comprising a metal salt, and allowing an effective amount of the formulation to penetrate the substrate, and sequentially but without regard to order; contacting the substrate with a formulation comprising an oxygen source, and allowing an effective amount of the formulation to penetrate the substrate; such that the two formulations react with each other in contact with the substrate

to impart a stable change to the characteristics of the substrate.

Claim 3 adds to claim 30 that the oxygen source is a peroxide and both formulations are aqueous solutions.

Claim 4 adds to claim 30 that the metal salt is selected from the group consisting of salts of iron, silver, zinc, cerium, copper, magnesium, molybdenum, nickel, tin, chromium, aluminum, barium, calcium, sodium, potassium, and titanium, and combinations.

Claim 5 adds to claim 30 that the metal salt is selected from the group consisting of salts of aluminum, antimony, beryllium, bismuth, cadmium, chromium, cobalt, copper, gold, iridium, lead, magnesium, manganese, mercury, molybdenum, nickel, niobium, osmium, platinum, plutonium, potassium, rhodium, selenium, silicon, silver, sodium, tantalum, thorium, tin, titanium, tungsten, uranium, vanadium, and zinc, and combinations.

Claim 6 adds to claim 30 that the metal salt is selected from the group consisting of sulfates, chlorides, perchlorates, acetates, nitrates, permanganates, thiosulfates, and oxides, and combinations.

Claim 7 adds to claim 30 that the metal salt is selected from the group consisting of silver sulfate, silver perchlorate, silver nitrate, silver sulfate, iron (II) chloride, zinc perchlorate, iron (II) perchlorate, iron (II) sulfate, copper acetate, sodium thiosulfate, magnesium thiosulfate, potassium



thiosulfate, potassium nitrate, potassium permanganate, copper nitrate, copper II carbonate dihydroxide, copper sulfate, titanium III sulfate, magnesium nitrate, cerium (III) perchlorate, and cerium nitrate, and combinations.

Claim 8 adds to claim 30 that the metal salt is selected from the group consisting of molybdenum (VI) oxide, zinc sulfate, copper (II) chloride, nickel perchlorate, nickel sulfate, copper (II) perchlorate, tin (II) sulfate, tin (I) chloride, chromium (III) sulfate, aluminum sulfate, cerium (III) perchlorate, zinc perchlorate, titanium hydride, chromium (III) perchlorate, zinc powder, manganese (II) chloride, aluminum chloride, titanium (IV) chloride, silver chloride, and titanium (II) sulfate, and combinations.

Claim 9 adds to claim 30 that the oxygen source is a peroxide.

Claim 10 adds to claim 30 that the oxygen source is selected from the group consisting of hydrogen peroxide, sodium peroxide, zinc peroxide, calcium peroxide, barium peroxide, and lithium peroxide, and combinations.

Claim 20 adds to claim 2 the step of drying the substrate between the two steps.

Claim 21 adds to claim 2 that the preparations are aqueous solutions and are applied between the freezing point and boiling point of the solutions under the process conditions of the method.

Claim 22 adds to claim 2 applying a sealing coat over the substrate surface.

Claim 30 describes a kit for coloring a wood substrate, comprising a metal salt preparation, and an oxygen source preparation, the preparations being adapted to penetrate the substrate when applied, and both preparations, when applied sequentially in effective amounts, being adapted to react with each other to impart a fixed physical characteristic to the substrate.

Claim 31 adds to claim 30 that the metal salt preparation and/or the oxygen source preparation further comprises an additive selected from the group consisting of thickener, alcohol, emulsifier, coloring agent, pigment, dye, bleach, sealer, finishing agent, tint, acrylic finish, latex finish, polyurethane, alcohol, gelling agent, tableting agent, surfactant, buffer, citric acid, tannic acid, acetic acid, other acid, color, salt, stabilizer, antimicrobial, antifungal, insecticide, insect repellant, ultraviolet protectant, and fire retardant, and combinations.

Claim 32 adds to claim 30 that the metal salt preparation is an aqueous solution comprising between about 0.001% and about 20% (w/v) metal salt.

Claim 33 adds to claim 30 that the oxygen source preparation is an aqueous solution comprising between about 0.1% and about 50% (w/v) peroxide.

Claim 34 adds to claim 30 that the metal salt preparation is an aqueous solution comprising between about 0.025 % and about 8% (w/v) metal salt.

Claim 35 adds to claim 30 that the oxygen source preparation is an aqueous solution comprising between about 0.3% and about 15% peroxide.

Claim 36 adds to claim 30 that the preparations are concentrates suitable for dilution by a user.

As previously pointed out, Dombay merely coats wood with an oxidizing agent to lighten the wood. Dombay uses ammonium persulfate, and cupric sulfate as accelerants in concentrated hydrochloric acid with a methylated spirit, and an organic solvent teepol. Dombay treats some woods with an A solution to produce a darkening effect, and some woods with a B solution to produce a lightening effect. It is clear that Dombay does not teach the present invention as specifically pointed out in the claims.

Dombay relates to wood bleaching in which the reference mandates the use of methylated spirit, which the present invention particularly avoids. The present specification describes the ill-effects of prior art procedures that mandate alcohol based substances which harm the environment. In fact, Example 4, relied on by the Examiner, provides for 150 ml of methylated spirit. Potassium permanganate and cupric sulphate are used as bleaching accelerants in the one-step Dombay bleaching process. Acetic acid is used to stop the bleaching.

That [the prior art] might incorporate elements which could be used in appellants' system does not render appellants' claims obvious when there is no suggestion of using these elements in substantially the same manner as appellants use them. In re Donovan, 184 USPQ 414, 421 (CCPA, 1975).

Claims 2-10, 20-22, 30-36 are patentable under 35 U.S.C. 103(a) over Bures.

Claims 2-10, 20-22, and 30-36 have been described earlier.

As previously stated, Bures relates to a three step process of treating woods with metal salts, oxidants, dyes and permeation agents. However, the reference does not teach nor suggest a kit for treating and coloring a wood substrate, comprising a first component aqueous solution of oxidizable metal salt preparation for a first application to the wood substrate, and a second component aqueous solution of oxygen source preparation for a sequential application to the wood substrate.

Like each of the other references, Bures too expressly intends to impart a stabilized color to dark and medium colored woods by utilizing hypochlorite, persulphate and peroxide compounds. The use of mineral salt ions specifically Iron, Zinc or Silver is not employed or mentioned. In fact, the reference relies on the exclusive use of hypochlorite, persulphate and peroxide compounds to bleach wood.

Contrastingly, the claimed process is expressly concerned with darkening the color of the top-most layer of wood cellulose and other substrates by transitioning water soluble mineral ions into oxides within the top-most layer of the substrate. The process bonds the transitioned minerals to the cellulose fibers and creates a more or less stable color which may slightly lighten or darken over time.

In fact, none of the references teach or suggest the claimed two step in situ treatment with the unique kit defined in the present claims. The present invention uniquely provides treatment of all substrates including light colored wood and is exclusively a two part process.

"To establish inherency, the extrinsic evidence 'must make it clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" In re Robertson, 48 USPQ2d 1949, 1951 (Fed. Cir. 1999) quoting from Continental Can Co. v. Monsanto Co., 20 USPQ2d 1746, 1749 (Fed. Cir. 1991). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. Id. 20 USPQ2d at 1749.

The invention provides an aqueous solution of a mineral salt thereby providing water soluble ions of mineral salts which are applied to a suitable substrate and allowed to briefly dry. In a second step the water soluble mineral salts transition into insoluble mineral oxide compounds which form inside and around the cellulose fibers. The agents used to transition the mineral salt ions into insoluble oxide compounds include dilute hydrogen peroxide solutions, to prevent harm to the environment, and other dilute strength agents such as sodium peroxide and sodium hydroxide. Again, stronger solutions pose a greater threat to the environment and user.

The present process is expressly useful in enhancing the natural nuances of a particular piece of wood, thereby giving it a more natural color than a conventional stain. The process enhances the variations of color within a given species of wood, therefore differing from the prior art, all of which aim to provide bleaching for more uniform color of wood or of hair, which is not relevant.

The commercial viability of the present process relies on enhancing the naturally occurring qualities of a specific wood particularly lighter colored species such as Pine, Larch, Poplar, Alder, Maple, Fir, Ash, Bamboo (a grass), Hackberry, Black Willow, Oak, Birch, and others. All of those are considered colored woods, many of which are rapidly grown, sustainable harvestable species.

"The inherency of an advantage and its obviousness are entirely different questions. That which may be inherent is not necessarily known. Obviousness cannot be predicated on what is unknown. In re Spormann and Heinke, 150 USPQ 449, 452 (CCPA 1966). "... if the Patent Office wishes to rely on what 'Those familiar with [invention] would know,' it must produce some reference showing what such knowledge consists of." Id.

The light fastness is considerably better than prior art dyes (specifically aniline dyes) used to color wood and other substrates. The primary commercial use for the invention is to impart a range of colors (Old Growth wood tones primarily) to light and medium colored woods and to use as an alternative to

conventional staining products which may contain hazardous VOC's or other hazardous chemical compounds. Also, conventional dyes and colorants for wood does not enhance the natural qualities of the wood or other substrate as does the Auger Mineral Stain Process.

Minerals used in the present invention expressly create color within the wood or substrate. Minerals utilized alone or in combination are: Iron, Zinc and Silver salts, specifically Iron I Chloride, Sulfate and Perchlorate; Zinc Perchlorate, Silver Perchlorate and Silver Nitrate, among others.

No potassium persulphate, sodium persulfate, ammonium persulfate, sodium carbonate, acetic acid, glacial acetic acid, potassium permanganate, cupric ions or ammonia are used in the claimed process. Thus, the claimed invention always imparts the substrate with an alkaline pH.

See In re Meng, 181 USPQ 94, 97 (CCPA 1974), wherein the Court held:

"Of course the invention seems simple, after the fact. But simplicity, particularly in an old and crowded art, may argue for rather than against patentability. In re Sporck, 133 USPQ 360 (CCPA 1962). Progress in the crowded arts, usually made in small increments, is as important as it is in arts at the pioneer stage. In re Hummer, 113 USPQ 66 (CCPA 1957). The Constitution envisages and seeks progress in the 'useful arts,' not just those more esoteric or scientific."

Proper surface preparation consistent with any preparatory procedure used to prepare wood for finishing allows for adequate penetration of the mineral salt solution. Additionally an anionic surfactant may be added to the mineral salt solution to



aid in the penetration of the mineral salt solution, this is especially useful for industrial and manufacturing situations where dust, grease and other debris may be present and form surface tension prohibiting the mineral salt solution (A) from penetrating the substrate.

"The mere fact that a certain thing may result from a given set of circumstances is not sufficient [to establish inherency]." In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993), quoting from In re Oelrich, 212 USPQ 323, 326 (CCPA 1981). "Such a retrospective view of inherency is not a substitute for some teaching or suggestion supporting an obviousness rejection." Rijckaert, id., quoting from In re Newell, 13 USPQ2d 1248, 1250 (Fed. Cir. 1989).

Contrary to the prior art, and according to the invention, the solution is completely dry prior to the application of the (catalyst) solution. Also, contrary to the prior art, the present invention transitions the European Oak instantly through its process to the yellow color the prior art is attempting to avoid. By producing the yellow or "aged" color Auger allows woodworkers to match the tone of "aged" or "antique" wood thereby giving woodworkers the opportunity to make reproductions, restore or color wood articles in a manner consistent with the color expected from wood which has acquired an "aged" or "antique" appearance.

The Board, in Ex parte Levengood, 28 USPQ2d 1300, 1301 (Board of App. and Inter. 1993), observed:

"The only suggestion for the examiner's combination of the isolated teachings of the applied references improperly stems from appellant's disclosure and not from the applied prior art. In re Ehrreich, 200 USPQ 504 (CCPA 1979). At best, the examiner's comments regarding obviousness amount to an assertion that one of ordinary skill in the art would have been able to arrive at the appellant's invention because he had the necessary skills to carry out the requisite... steps. This is an inappropriate standard for obviousness."

The above is true for the present case.

Nothing in the references teaches or suggests the claimed features. Therefore, the references cannot anticipate nor render obvious any of the claims.

The examiner's reliance on In re Schoenwald is misplaced. Schoenwald had only one limited claim:

An ophthalmic composition to treat having "N-cyclohexyl-N-methyl-2 phenylethylamine and its biologically acceptable salt forms".

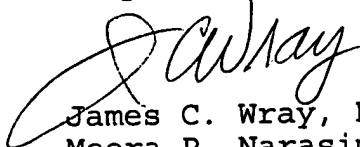
Schoenwald "... received a method patent for that [use]."

The present invention in contrast is described as a two-part, two-step wood treatment kit for treating wood in two specific sequential first and second applying steps.

No such kit has been described in the prior art. Indeed, the applicant is not claiming a single compound or a single composition as in Schoenwald, neither has the applicant already "... rewarded fully for his contribution nor would ... any more be a gratuity" as held in Schoenwald.

Reconsideration and allowance of the claims are respectfully  
requested.

Respectfully,



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